GRS Gabriel Roeder Smith & Company
Consultants & Actuaries

JUDGES' RETIREMENT SYSTEM OF ILLINOIS

2016 Experience Review

For the Years July 1, 2012, to June 30, 2015

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April 27, 2016

Board of Trustees
Judge's Retirement System
Springfield, IL

Subject: Experience Review for the Years July 1, 2012, to June 30, 2015

Dear Members of the Board:

At your request, we have performed a review of the actuarial assumptions used in the annual actuarial valuation of the Judges' Retirement System of Illinois ("JRS" or "System"). The primary purpose of the study is to determine the continued appropriateness of the current actuarial assumptions by comparing actual experience to expected experience. Our study was based on census information for the period from July 1, 2012, to June 30, 2015, as provided by JRS Staff.

Our study includes a review of the experience associated with the following actuarial assumptions:

- Investment Return;
- Salary Increases;
- Mortality;
- Withdrawal; and
- Retirement.

Section I contains a summary of the actuarial assumption review. The detailed results of this analysis are set forth in Section II of this report. Section III contains the cost impact on the Statutory contribution and funded status of the System as a result of the assumption modifications. Finally, Section IV contains a summary of all proposed assumptions.

This assumption review is based on data provided by JRS for the annual actuarial valuations as well as the Illinois State Board of Investments ("ISBI") for the investment allocation and ISBI's investment consultant, Meketa, for capital market assumptions. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided.

The results of the experience study and recommended assumptions set forth in this report are based on the data and actuarial techniques and methods described above, and upon the provisions of JRS as of the most recent valuation date, June 30, 2015. All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. Based on these items, we certify these results to be true and correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

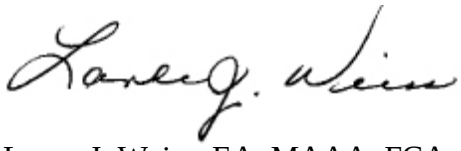
This report should not be relied on for any purpose other than the purpose stated.

Alex Rivera and Lance J. Weiss are Members of the American Academy of Actuaries, are independent of the plan sponsor and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

Respectfully submitted,

Gabriel, Roeder, Smith & Company

Alex Rivera, FSA, EA, MAAA, FCA
Senior Consultant



Lance J. Weiss, EA, MAAA, FCA
Senior Consultant

cc: David Kausch, Gabriel, Roeder, Smith & Company
Ryan Gundersen, Gabriel, Roeder, Smith & Company

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SECTION I

SUMMARY

JUDGES' RETIREMENT SYSTEM OF ILLINOIS
SUMMARY

Background

For any pension plan, actuarial assumptions are selected that are intended to provide reasonable estimates of future expected events, such as retirement, turnover and mortality. These assumptions, along with an actuarial cost method, the employee census data and the plan's provisions are used to determine the actuarial liabilities and overall actuarially determined funding requirements for the plan. The true cost to the plan over time will be the actual benefit payments and expenses required by the plan's provisions for the participant group under the plan. To the extent the actual experience deviates from the assumptions, experience gains and losses will occur. These gains (losses) then serve to reduce (increase) future actuarially determined contributions and increase (reduce) the funded ratio. The actuarial assumptions should be individually reasonable and consistent in the aggregate, and should be reviewed periodically to ensure that they remain appropriate. The actuarial cost method, for plan sponsors that use actuarially based funding policies, automatically adjusts contributions over time for differences between what is assumed and the true experience under the plan.

The Actuarial Standards Board ("ASB") provides guidance on measuring the costs of financing a retirement program through the following Actuarial Standards of Practices ("ASOP"):

(1) ASOP No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions;*
(2) ASOP No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations;*
(3) ASOP No. 35, *Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations; and*
(4) ASOP No. 44, *Selection and Use of Asset Valuation Methods for Pension Valuations*.

The recommendations provided in this report are consistent with the preceding actuarial standards of practice.

A revised version of ASOP No. 27 was adopted in September 2013. The revised statement is applicable for valuations with a measurement date on or after September 30, 2014. Therefore, the first valuation for JRS that was impacted by the revised statement was the June 30, 2015, actuarial valuation.

In developing specific actuarial assumptions, ASOP No. 27 requires the actuary to follow a general process of:

(1) Identifying the components of the assumption;
(2) Evaluating relevant data;
(3) Considering specific and general factors related to the measurement; and
(4) Selecting a reasonable assumption.

In evaluating relevant data, the actuary should include appropriate recent and long-term historic data, but not give undue weight to recent experience.

Prior to the revision under ASOP No. 27, actuaries could use a "best-estimate" range to determine reasonableness for the assumption. Under the best-estimate standard, an assumption was deemed reasonable if it was selected from within a probabilistic range over which it was "more likely than not" to fall. However, under the revised ASOP No. 27, an assumption is considered reasonable if:

- It is appropriate for the purpose of the measurement;
- It reflects the actuary's professional judgment;
- It takes into account historical and current economic data that is relevant as of the measurement date;
- It reflects the actuary's estimate of future experience, the actuary's observation of the estimates inherent in market data, or a combination thereof; and
- It has no significant bias (i.e., it is not significantly optimistic or pessimistic).

Thus, the economic assumption recommendation has moved from a range to a single estimate.

Also according to the revised ASOP No. 27, the actuary should recognize the uncertain nature of the items for which assumptions are selected and, as a result, may consider several different assumptions reasonable for a given measurement. The actuary should also recognize that different actuaries will apply different professional judgment and may choose different reasonable assumptions. As a result, a range of reasonable assumptions may develop both for an individual actuary and across actuarial practice.

Assumptions Reviewed

The actuarial assumptions are usually divided into three categories:

1. Economic assumptions, which include:
    - Assumed rate of price inflation (as measured by the change in the Consumer Price Index for all urban consumers)
        - Underlies all other economic assumptions
        - Basis for cost-of-living increases for members hired on or after January 1, 2011
    - Assumed long-term rate of return on investments
        - Rate at which projected benefits are reduced to present value
        - Basis for reversionary annuity factors
    - General wage increases
        - Reflects inflationary forces on increases in pay for all members
    - Rate of payroll growth
        - Reflects expectation of growth in total payroll and affects level percent of pay statutory contribution

The economic assumptions are generally chosen on the basis of the actuary's expectations as to the effect of future economic conditions on the operation of the plan, with input from Staff, the Board and other investment advisors.

2. Demographic assumptions, which include the following rates:
    - Mortality
    - Retirement
    - Withdrawal (other termination of employment)

Demographic assumptions are generally based on the plan's own experience, taking into account emerging trends. Rates of salary increase due to promotion and longevity are also related to the plan's experience.

The accuracy and extent of the data is an important consideration in assessing demographic experience. The accuracy of the data for this study was good, but a very large amount of data is required to develop a credible mortality table. For this reason, we do not necessarily give full credibility to the actual JRS mortality experience (since it is so limited), but also factor in general experience among a wider universe of pension plans and retirement systems. The selection of the mortality table will therefore be based on a combination of the plan's actual experience and general trends among the universe of pension plans and retirement systems.

3. Other methods and assumptions, which include the following:
    - Cost method
    - Amortization method
    - Asset smoothing method
    - Pay increase and decrement timing assumptions

Key Findings and Recommendations

Gabriel, Roeder, Smith & Company ("GRS") has performed an experience study of the Judges' Retirement System ("JRS" or "System") for the period from July 1, 2012, to June 30, 2015. The primary purpose of the study was to compare the demographic and economic experience against the actuarial assumptions used in the valuations. Our study was based on the information used to perform the annual actuarial valuations for the period from July 1, 2012, to June 30, 2015.

Following is a summary of our key findings and recommendations:

- **Price inflation**: We recommend lowering the rate of price inflation from 3.00 percent to 2.75 percent.
- **Investment return**: The investment return assumption, net of investment expenses, compounded annually, is currently 7.00 percent. We recommend lowering the rate to 6.75 percent and annually monitoring the assumption for continued reasonableness in the future.
- **Payroll growth assumption**: We recommend lowering the general payroll growth assumption from 3.75 percent to 3.00 percent, which reflects an underlying general price inflation assumption of 2.75 percent.
- **Salary increase**: We reviewed salary experience for the period from July 1, 2012, to June 30, 2015. We determined salary increases between valuations and calculated average annual salary increases. We recommend lowering the salary increase assumption from its current level to better reflect recent experience.

- **Normal retirement rates:** We recommend decreasing the overall rates to better reflect observed experience.
- **Turnover rates:** We recommend increasing the current rate for both Tier 1 and Tier 2 members. For Tier 2 members with less than five years of service, we recommend increasing the turnover rate to a flat rate of 1.75 percent.
- **Mortality rates:** We recommend changing from the RP-2000 Combined Healthy Mortality table projected to 2015 to the RP-2014 White Collar Total Healthy Annuitant Mortality table, set forward one year for males and set back one year for females, with projected generational mortality improvement, for the post-retirement mortality assumption. We recommend using the RP-2014 White Collar Total Employee Mortality table for the pre-retirement mortality assumption. This new mortality table is a move from a single dimensional age-based table to a two dimensional table, where the year a person was born also influences their mortality rate. The specific mortality table recommendations and a more detailed description of the new mortality tables can be found in Section II.

The impact of adopting the recommended assumptions is summarized in the table below. The recommended assumptions increase the actuarial liability and decrease the funded ratio.

		Experience Study		
	Baseline Valuation	7.00% Discount Rate Changing Mortality Tables	7.00% Discount Rate Changing Mortality Tables and all Demographic Assumptions	6.75% Discount Rate Changing Mortality Tables and all Demographic Assumptions
Valuation Date:	June 30, 2015	June 30, 2015	June 30, 2015	June 30, 2015
Estimated Statutory Contributions for FY 2018:				
• Annual Amount	$ 131,384,105	$ 145,724,762	$ 140,338,299	$ 144,533,089
• Percentage of Covered Payroll	79.174%	87.795%	85.224%	87.772%
Estimated Annual Determined Contribution* (ADC) for FY 2018:				
• Annual Amount	$ 152,387,072	$ 165,801,165	$ 158,955,029	$ 163,710,207
• Percentage of Covered Payroll	91.831%	99.890%	96.530%	99.418%
Actuarial Information				
• Normal Cost Amount	$ 42,463,979	$ 45,136,231	$ 40,453,568	$ 42,797,021
• Actuarial Accrued Liability (AAL)				
Annuitants	$ 1,563,349,628	$ 1,643,109,484	$ 1,643,109,484	$ 1,682,779,510
Inactive Members	7,639,743	8,052,887	8,052,887	8,385,975
Active Members	743,157,944	791,856,980	731,580,972	760,953,418
Total	$ 2,314,147,315	$ 2,443,019,351	$ 2,382,743,343	$ 2,452,118,903
• Unfunded Actuarial Accrued Liability	$ 1,509,958,471	$ 1,638,830,507	$ 1,578,554,499	$ 1,647,930,059
• Funded Ratio based on AVA	34.75%	32.92%	33.75%	32.80%
• UAAL as % of Covered Payroll	852.29%	925.03%	891.01%	930.17%
• Funded Ratio based on MVA	36.04%	34.13%	35.00%	34.01%

** Normal Cost plus a 25-year level percent of capped payroll closed-period amortization of the Unfunded Accrued Liability.*

SECTION II
EXPERIENCE ANALYSIS

Economic assumptions reflect the effects of economic forces on the projections of retirement benefits payable from the plan and in the discounting of those benefits to present value.

These assumptions are based, at their core, on the assumed level of price inflation. Each economic assumption is then developed from expected spreads over price inflation. Since price inflation is relatively volatile and is subject to a number of influences not based on recent history, these assumptions are less reliably based on recent past experience than are the demographic assumptions.

The key economic assumptions are:

1. Assumed Rate of Inflation – The rate of price inflation (as measured by the Consumer Price Index for all Urban consumers) which underlies the remainder of the economic assumptions.
2. Assumed Rate of Investment Return – The rate at which projected future benefits under the system are reduced to present value, and future assets are projected.
3. Rate of General Annual Pay Increases – This reflects inflationary forces on increases in pay for individual members.

Inflation

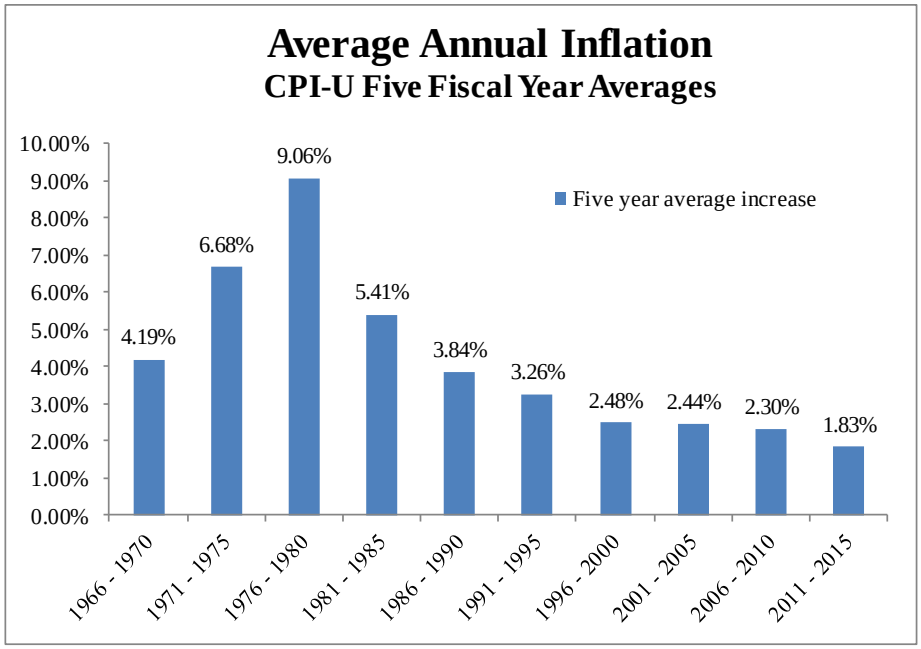
By "inflation," we mean price inflation, as measured by annual increases in the Consumer Price Index ("CPI"). This inflation assumption underlies all of the other economic assumptions we employ. It not only impacts investment return, but also salary increase rates and the payroll growth assumption. The current annual inflation assumption is 3.00 percent.

Over the five-year period from June 2010 through June 2015, the CPI-U has increased at an average rate of 1.83 percent. However, the assumed inflation rate is only weakly tied to past results.

The following table shows the average inflation over various periods, ending June 2015.

Fiscal Year	Annual Increase in CPI-U
2010-11	3.56%
2011-12	1.66%
2012-13	1.75%
2013-14	2.07%
2014-15	0.12%
3-Year Average	1.31%
5-Year Average	1.83%
10-Year Average	2.07%
20-Year Average	2.26%
25-Year Average	2.46%
30-Year Average	2.69%
40-Year Average	3.80%
50-Year Average	4.13%

The graph below shows the average inflation over 5-year periods over the last 50 years:



We surveyed the inflation assumption used by investment consulting firms. In our sample of eight firms, the inflation assumption ranged from 2.11 percent to 2.5 percent, with an average of 2.27 percent.

In the Social Security Administration's 2015 Trustees Report, the Office of the Chief Actuary is projecting a long-term average annual inflation rate of 2.7 percent under the intermediate cost assumption. (The inflation assumption is 3.4 percent and 2.0 percent, respectively, in the low cost and high cost projection scenarios.)

Therefore, we believe a reasonable long-term inflation assumption will likely fall in the range of 2.00 percent to 3.50 percent, although we recognize that inflation may fall outside this range over the next few years. We are recommending the inflation assumption be lowered from 3.00 percent to 2.75 percent. This is close to the average of 2.69 percent over the last 30 years and consistent with the assumption used by the SSA Office of the Chief Actuary for the intermediate cost projections.

Investment Return

ASOP 27

Actuaries are required to comply with Actuarial Standard of Practice No. 27 ("ASOP No. 27") in setting economic assumptions for retirement plans, including the assumed investment return rate.

In a public retirement system like JRS, it is ultimately the Retirement Board's responsibility to approve the actuarial assumptions used in the actuarial valuations. It is the actuary's duty to provide the Board with information needed to make those decisions and to make recommendations to the Board. Although the Board is the ultimate decision-making body, we are still bound by ASOP No. 27 in providing advice or recommendations to the Board.

According to the revised ASOP No. 27 applicable to actuarial valuations with a measurement date on or after September 30, 2014, each economic assumption selected by the actuary should be reasonable. For this purpose, an assumption is reasonable if it has the following characteristics:

- It is appropriate for the purpose of the measurement;
- It reflects the actuary's professional judgment;
- It takes into account historical and current economic data that is relevant as of the measurement date;
- It reflects the actuary's estimate of future experience, the actuary's observation of the estimates inherent in market data, or a combination thereof; and
- It has no significant bias (i.e., it is not significantly optimistic or pessimistic).

Also according to the revised ASOP No. 27, the actuary should recognize the uncertain nature of the items for which assumptions are selected and, as a result, may consider several different assumptions reasonable for a given measurement. The actuary should also recognize that different actuaries will apply different professional judgment and may choose different reasonable assumptions. As a result, a range of reasonable assumptions may develop both for an individual actuary and across actuarial practice.

Real Return

The allocation of assets within the universe of investment options will significantly impact the overall performance. Therefore, it is meaningful to identify the range of expected returns based on the fund's targeted allocation of investments and an overall set of capital market assumptions.

Based on information provided by JRS and ISBI, following is a table with the System's current target asset allocation and capital market assumptions:

Asset Category	Current Target	Annualized Average Return	Annualized Standard Deviation
U.S. Equity	23%	9.5%	18.0%
Developed Foreign Equity	13%	10.1%	20.0%
Emerging Markets Equity	7%	14.0%	26.5%
Private Equity	10%	12.3%	24.0%
Intermediate Investment Grade Bonds	11%	3.7%	4.5%
Long-term Government Bond	3%	4.4%	12.5%
TIPS	5%	3.6%	7.5%
High Yield Bonds	3%	7.6%	12.5%
Bank Loans	3%	6.2%	10.0%
Emerging Market Debt	3%	6.7%	13.0%
Real Estate	11%	6.7%	12.5%
Infrastructure	5%	8.0%	16.0%
Hedge Fund	3%	6.2%	10.5%
Total	**100%**	**8.37%**	**12.9%**

Provided by ISBI's investment consultant, Meketa.

We also reviewed capital market assumptions developed and published by eight independent investment consulting firms.

These investment consulting firms periodically issue reports that describe their capital market assumptions; that is, their estimates of expected returns, volatility and correlations among the different asset classes. While some of these assumptions may be based upon historical analysis, many of these firms also incorporate forward looking adjustments to better reflect near-term and long-term expectations. The estimates for core investments (i.e., fixed income, equities and real estate) are generally based on anticipated returns produced by passive index funds.

Given the System's current target asset allocation and the capital market assumptions from the investment consultants, the development of the average nominal return, net of investment expenses, is provided in the following table:

Investment Consultant	Investment Consultant Expected One Year Nominal Return	Investment Consultant Inflation Assumption	Expected Real Return (2)–(3)	Actuary Inflation Assumption	Expected Nominal Return (4)+(5)	Investment Expenses	Expected Nominal Return Net of Expenses (6)-(7)		Standard Deviation of Expected Return (1-Year)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		(9)
1	5.76%	2.12%	3.63%	2.75%	6.38%	0.30%	6.08%		10.80%
2	6.90%	2.50%	4.40%	2.75%	7.15%	0.30%	6.85%		11.30%
3	6.97%	2.50%	4.47%	2.75%	7.22%	0.30%	6.92%		12.70%
4	7.13%	2.25%	4.88%	2.75%	7.63%	0.30%	7.33%		12.70%
5	7.28%	2.20%	5.08%	2.75%	7.83%	0.30%	7.53%		11.70%
6	7.23%	2.11%	5.12%	2.75%	7.87%	0.30%	7.57%		11.90%
7	7.52%	2.26%	5.26%	2.75%	8.01%	0.30%	7.71%		11.40%
8	8.14%	2.20%	5.94%	2.75%	8.69%	0.30%	8.39%		13.00%
Average	**7.11%**	**2.27%**	**4.85%**	**2.75%**	**7.60%**	**0.30%**	**7.30%**		**11.94%**

**Average real rate of return is 4.55% net of investment expenses.*

***Based on arithmetic average.*

Investment Consultant	Investment Consultant Expected One Year Nominal Return	Investment Consultant Inflation Assumption	Expected Real Return (2)–(3)	Actuary Inflation Assumption	Expected Nominal Return (4)+(5)	Investment Expenses	Expected Nominal Return Net of Expenses (6)-(7)		Standard Deviation of Expected Return (1-Year)
Meketa	8.37%	2.50%	5.87%	2.75%	8.62%	0.30%	8.32%		12.85%

Information based on ISBI's capital market assumptions.

Based on each firm's assumptions, we estimated the expected real return of JRS' portfolio (col. (4)). Next, based on the actuary's recommended inflation and investment expense assumption, we estimated the nominal return net of investment expenses (col. (8)). As the table shows, the average one-year nominal return (net of expenses) of the eight firms is 7.30 percent, which is 0.30 percentage points higher than the current assumption of 7.00 percent. The average one-year nominal return, based on capital market assumptions provided by ISBI's investment consultant, produced 8.32 percent.

In addition to examining the expected one-year return, it is very important to review the anticipated volatility of the investment portfolio and understand the range of long-term net returns that could be expected to be produced by the investment portfolio. Therefore, the following table provides the 25th, 50th and 75th percentiles of the 20-year geometric average of the expected nominal return, net of expenses, as well as the probability of exceeding the current 7.00 percent assumption.

Investment Consultant	Distribution of 20-Year Average Geometric Net Nominal Return			Probability of exceeding 6.75%	Probability of exceeding 7.00%
	25th	50th	75th		
(1)	(2)	(3)	(4)	(6)	(6)
1	3.93%	5.53%	7.15%	30.6%	27.0%
2	4.57%	6.25%	7.95%	42.0%	38.2%
3	4.28%	6.16%	8.07%	41.7%	38.3%
4	4.68%	6.56%	8.48%	47.4%	43.9%
5	5.16%	6.89%	8.64%	52.1%	48.3%
6	5.13%	6.90%	8.70%	52.3%	48.5%
7	5.40%	7.09%	8.81%	55.4%	51.4%
8	5.68%	7.60%	9.56%	61.6%	58.3%
Average	**4.85%**	**6.62%**	**8.42%**	**47.9%**	**44.2%**

Investment Consultant	Distribution of 20-Year Average Geometric Net Nominal Return			Probability of exceeding 6.75%	Probability of exceeding 7.00%
	25th	50th	75th		
Meketa	5.64%	7.54%	9.48%	61.0%	57.6%

Information based on ISBI's capital market assumptions.

As the analysis shows, there is a 50 percent likelihood that the 20-year average net real return will be between 4.85 percent and 8.42 percent. Please note that only two of the investment consulting firms' capital market assumption sets produced more than a 50 percent chance of exceeding the current assumption of 7.00 percent over the next 20 years. Furthermore, the average results of all eight firms indicate there is only about a 44 percent chance that the System will produce an average return that exceeds 7.00 percent over the next 20 years and a 48 percent chance that the system will produce an average return that exceeds 6.75 percent over the next 20 years. Based on capital market assumptions provided by ISBI's investment consultant, there is 58 percent chance the return exceeds 7.00 percent.

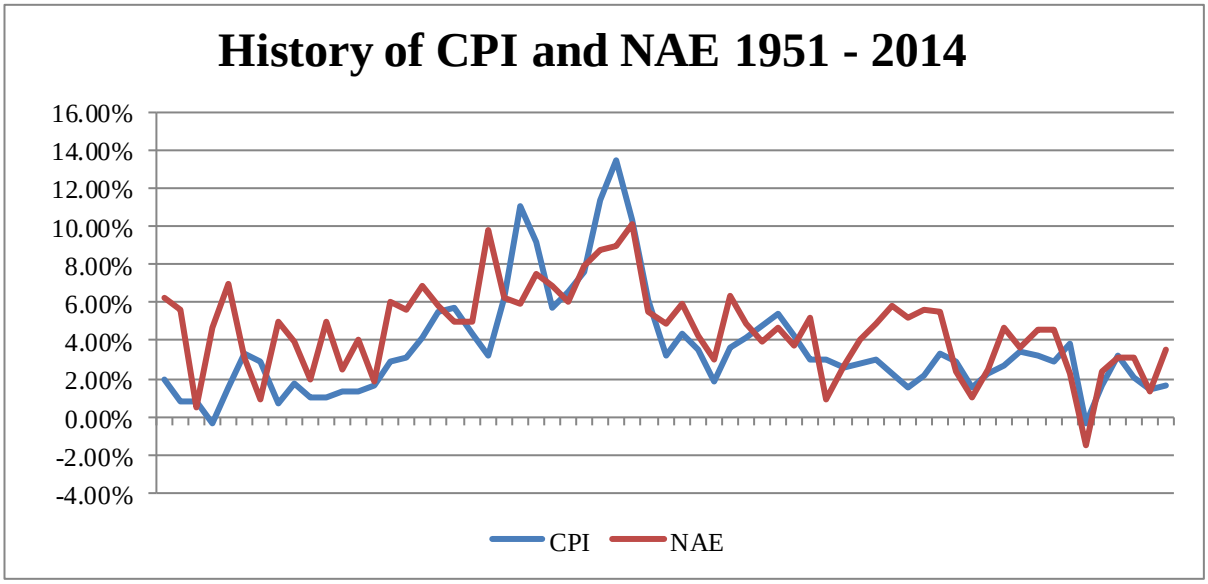
Recommendation

Based on our analysis of the expected investment return and the current target asset allocation, we recommend lowering the long-term investment return assumption of 7.00 percent to 6.75 percent. We recommend that the assumed investment return be reviewed before the next experience review if warranted. Also, any significant changes in the target asset allocation may warrant an additional review of the rate of return assumption. We believe that this assumption can be supported by the revised Actuarial Standard of Practice No. 27. Under the Standard, all economic assumptions must be selected to be consistent with the purpose of the measurement. The purpose of the measurement is to determine the contribution rate which will lead to the accumulation of assets to pay benefits when due.

The assumption of 6.75 percent is below the arithmetic mean of 7.30 percent as disclosed above. Section 3.8.3 j. of the revised Actuarial Standard of Practice No. 27 states that "the use of a forward looking expected arithmetic return as an investment return assumption will produce a mean accumulated value."

General Wage Increase and Payroll Growth Assumption

The JRS assumptions make a distinction between price inflation (currently assumed to be 3.00 percent) and the rate of payroll growth (currently assumed to be 3.75 percent). The National Average Earnings ("NAE") series published in connection with the operation of the Social Security program is a useful proxy for measuring general changes in wage levels in the economy. Increases in NAE typically exceed increases in the Consumer Price Index ("CPI"), although there are periods where the patterns are reversed. The economic argument for wages exceeding prices in the long run is that CPI is based on the prices of a fixed basket of goods whereas wages reflect innovations, real productivity growth, labor supply and demand and other factors in addition to pure price inflation.



Over the last 63 years, NAE has exceeded CPI 42 times and the averages over that period are 4.6 percent for NAE and 3.6 percent for CPI. The last 25 years has had fewer cases of high inflation, but the distinction between prices and wages still appears. Over the last 25 years, the average increase in NAE is 3.4 percent and the average increase in CPI is 2.6 percent.

As with the investment return assumption, past experience does not dictate future expectations. Current expectations are mixed on whether price and wage inflation will remain low in the short term, particularly due to the aftereffects of recent federal government spending. For a long-term view, the 2015 Annual Report from the Trustees of the Social Security Administration ("SSA") assumes an intermediate average CPI of 2.7 percent over the next 75 years and an intermediate growth assumption for average wages in covered employment of 3.9 percent. The SSA report provides alternate "Low-cost" assumptions of 3.4 percent CPI/5.2 percent wages and "High-cost" assumptions of 2.0 percent CPI/2.6 percent wages.

With ongoing pressure on the ability of states to sustain across the board increases in wages consistent with historical norms, we do not believe there is justification to increase the assumption for productivity increases; in other words, to increase the assumed gap between price increase and wage growth. In fact, we recommend lowering the assumption for productivity increases to 0.25 percent. Combining this recommendation with our recommended 2.75 percent inflation assumption implies a wage growth assumption of 3.00 percent. These assumptions are summarized below:

	Present Assumption	Recommended Assumption
Price Inflation	3.00%	2.75%
Productivity Increases	0.75%	0.25%
Total Wage Inflation	3.75%	3.00%

Salary Increase

The components that determine the total salary increase are wage inflation, merit and longevity increases and promotion increases. We reviewed the increase based on both age and service. A more credible pattern of increases emerged when salary increases were based on age only. Over the experience study period, average pay increases were 1.27 percent, which when compared to general inflation of 1.31 percent, yields a net real pay decrease of 0.04 percent. We recommend recognizing a portion of the lower salary experience and changing the merit, longevity and promotion increase portion of the salary increase assumption to better reflect actual experience.

This assumption was developed using both Tier One and Tier Two data and is applicable to both Tier One and Tier Two members.

Table and Graph I compare the salary experience, current assumptions and recommended assumptions by years of service for each of the following:

- Table I – Salary Experience by Age
- Graph I – Salary Experience by Age

JUDGES RETIREMENT SYSTEM OF ILLINOIS
SALARY SCALE ASSUMPTION

Table I

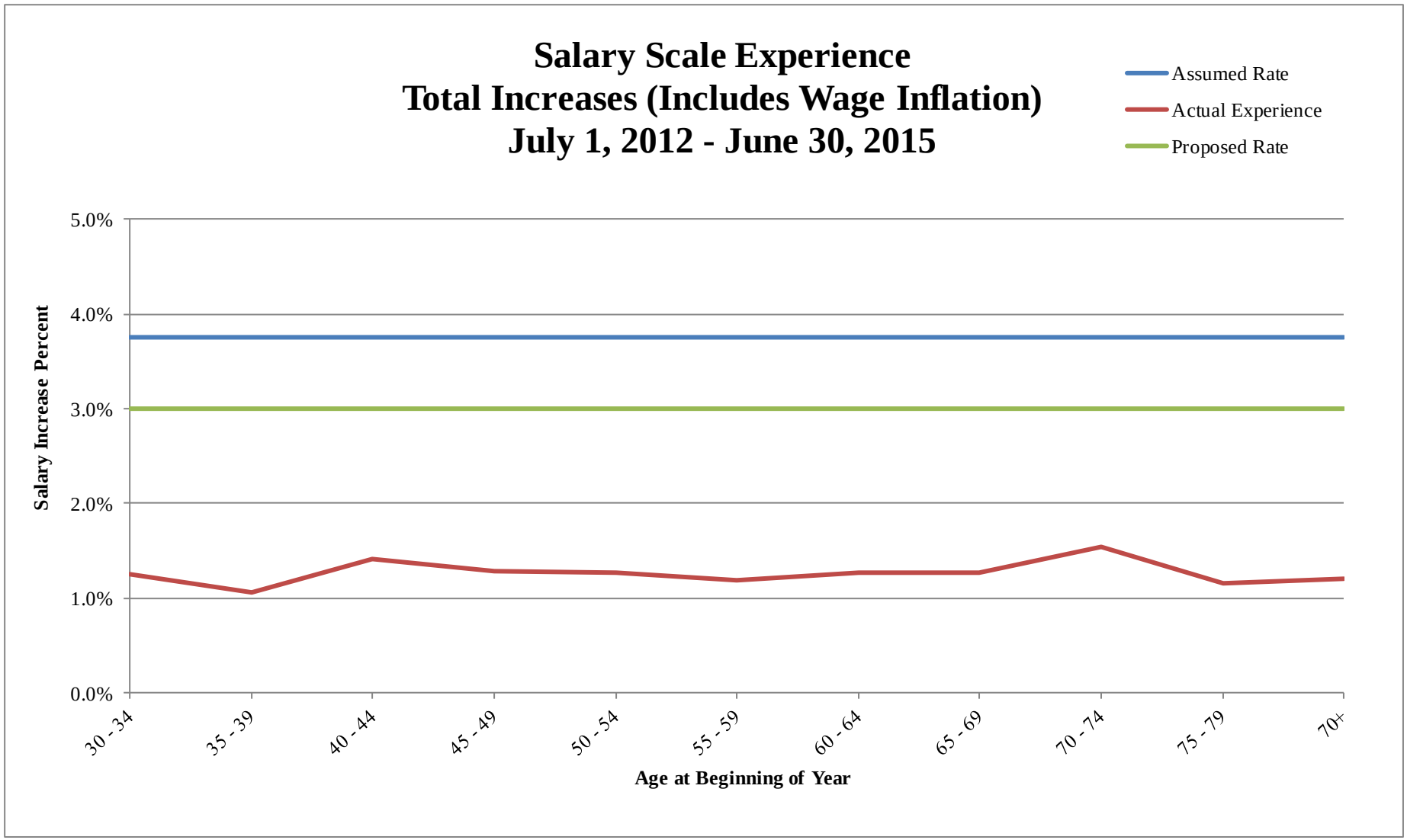
Age at Beginning of Year	Number	Actual Payroll		Actual Real Increase[1]	Actual Total Increase	Expected Total Increase[2]	Proposed Total Increase[3]
		Prior Year	Current Year				
30 - 34	2	366,865	371,454	-0.06%	1.25%	3.75%	3.00%
35 - 39	11	1,920,813	1,941,303	-0.24%	1.07%	3.75%	3.00%
40 - 44	124	22,044,014	22,356,846	0.11%	1.42%	3.75%	3.00%
45 - 49	308	55,013,387	55,721,806	-0.02%	1.29%	3.75%	3.00%
50 - 54	467	83,194,541	84,246,267	-0.05%	1.26%	3.75%	3.00%
55 - 59	684	122,935,393	124,395,539	-0.12%	1.19%	3.75%	3.00%
60 - 64	608	109,578,223	110,959,635	-0.05%	1.26%	3.75%	3.00%
65 - 69	341	61,752,813	62,540,145	-0.04%	1.28%	3.75%	3.00%
70 - 74	117	21,507,965	21,839,514	0.23%	1.54%	3.75%	3.00%
75 - 79	33	6,095,448	6,166,287	-0.15%	1.16%	3.75%	3.00%
70+	157	1,339,312	1,355,431	-0.11%	1.20%	3.75%	3.00%
Total	**2,852**	**485,748,774**	**491,894,227**	**-0.04%**	**1.27%**	**3.75%**	**3.00%**

[1] *Total increase less average inflation of 1.31 percent over experience study period.*

[2] *Expected total increase of 3.75 percent, includes general inflation of 3.00 percent.*

[3] *Proposed total increase of 3.00 percent, includes general inflation of 2.75 percent.*

Graph I


Salary Scale Experience
Total Increases (Includes Wage Inflation)
July 1, 2012 - June 30, 2015
Assumed Rate
Actual Experience
Proposed Rate
Salary Increase Percent
5.0%
4.0%
3.0%
2.0%
1.0%
0.0%
30 - 34
35 - 39
40 - 44
45 - 49
50 - 54
55 - 59
60 - 64
65 - 69
70 - 74
75 - 79
70+
Age at Beginning of Year

JUDGES' RETIREMENT SYSTEM OF ILLINOIS
DEMOGRAPHIC ASSUMPTIONS

The following pages present the analysis of the demographic assumptions. These assumptions include assumed rates of mortality among active and retired members, retirement patterns and turnover patterns. These patterns generally take the form of tables of rates of incidence based on age and/or years of service.

Absent any significant changes in benefit provisions, these assumptions generally exhibit reasonable consistency over periods of time. As a result, each demographic assumption is normally reviewed by relating actual experience to that assumed over the recent past.

The analysis of demographic experience is conducted for each assumption using a measure known as the "Actual to Expected (A/E) Ratio." The A/E Ratio is simply the ratio of the actual number of occurrences of the event to which the assumption applies (e.g., deaths or retirements) to the number expected to occur in accordance with the assumption. An A/E Ratio of 1.00 indicates that the assumption precisely predicted the number of occurrences. An A/E Ratio exceeding 1.00 indicates that the assumption underestimated actual experience. Conversely, an A/E Ratio lower than 1.00 indicates that the assumption overestimated actual experience.

These are statistical analyses. As a result, there are several considerations we must keep in mind as we analyze these ratios:

1. An actuarial assumption is designed to reflect average experience over long periods of time (30 - 50 years). As a result:
    a. A deviation between actual experience and that expected from our assumptions for one or two years does not necessarily mean that the assumption should be changed.
    b. A change in actuarial assumption should result if the experience indicates a consistent pattern which is different from that assumed over a period of years.
2. The larger the amount of data available, the more reliable the statistics used in the analysis. As a result:
    a. Events that occur with great frequency (e.g., general employment turnover) are more credibly predictable than those occurring less frequently (e.g., active member death).
    b. In all cases, data covering the entire study period produce more credible results than data for a single year.
    c. Year-by-year experience is helpful only in identifying trends and determining whether the three-year data is truly reflective of the entire period.

This analysis is based on the valuation data for the three-year period from July 1, 2012, to June 30, 2015.

Retirement

The System plan provisions establish the minimum eligibility requirements for retirement as follows:

Upon termination of State service, a Tier One member is eligible for an unreduced pension at age 60 with at least ten years of pension credit or at age 62 with more than six years of credit. A Tier One member is also eligible for a reduced pension at age 55 with at least ten years of pension credit.

The retirement annuity is determined according to the following formula based upon the member's final rate of salary:

- 3 1/2% for each of the first 10 years of service; plus
- 5% for each year of service in excess of 10

The maximum retirement annuity is 85% of the final rate of salary.

Retirement cost, however, is determined not by the minimum eligibility requirements but by the ages at which members actually retire. The valuation does not assume that everyone retires at earliest eligibility. The assumption about the timing of retirement once eligibility has been established is a major component in cost calculations. Note that higher rates of retirement at earlier retirement ages or years of service upon attaining retirement eligibility generally result in higher actuarially determined contributions, and vice versa.

Experience during the last three years was considered in the analysis shown on the following pages. The "Exposure" column shows the number of employees eligible to retire at various years of service or ages throughout the experience period. An individual could potentially be counted up to three times if eligible each year in the period. By tabulating employees in this fashion we are able to answer the question: "For all employees eligible at condition X, how many retired?"

Normal Retirement Experience

Current and past experience has shown that retirement rates under this System are correlated with age. Currently, the System uses age-based rates with higher rates at key ages, with 100 percent retirement at age 80. We recommend the following changes:

- For both male and female members, a decrease in rates to reflect the actual experience of the System

Applying the proposed rates to historical data generates the following number of retirements by age at retirement:

	Male Members			Female Members		
Nearest Age	Actual	Current Assumption	Proposed Assumption	Actual	Current Assumption	Proposed Assumption
60	11	15	11	3	6	4
61-65	44	40	36	12	14	12
66-70	21	23	23	3	5	5
71-74	9	11	9	2	2	1
75-79	3	6	5	0	1	1
80+	0	10	10	0	0	0
Total	**88**	**105**	**94**	**20**	**28**	**23**

Early Retirement Experience

Early retirement experience for male and female members was generally lower than the current early retirement rates. We recommend the following changes:

- For both male and female members, a decrease in rates to reflect the actual experience of the System

Retirement Experience and Recommendations

The table and graph on the following pages show experience for normal and early retirement.

- Table and Graph II(a) – Normal Retirement Experience
- Table II(b) – Early Retirement Experience

Table II(a)

Normal Retirement Experience

Male Retirement Experience									
	Actual Experience			Current Assumptions			Proposed Assumptions		
Nearest Age @ Retirement	Exposures	Retirements	Actual Rate	Expected Retirements	Assumed Rate	Actual / Expected	Expected Retirements	Proposed Rate	Actual / Expected
60	70	11	15.7%	15.40	22.0%	0.7	10.50	15.0%	1.0
61-65	364	44	12.1%	40.04	11.0%	1.1	36.40	10.0%	1.2
66-70	209	21	10.0%	22.99	11.0%	0.9	22.99	11.0%	0.9
71	23	2	8.7%	2.76	12.0%	0.7	2.53	11.0%	0.8
72	21	3	14.3%	2.94	14.0%	1.0	2.52	12.0%	1.2
73	15	2	13.3%	2.40	16.0%	0.8	1.95	13.0%	1.0
74	14	2	14.3%	2.52	18.0%	0.8	1.96	14.0%	1.0
75-79	32	3	9.4%	6.40	20.0%	0.5	4.80	15.0%	0.6
80+	10	0	0.0%	10.00	100.0%	0.0	10.00	100.0%	0.0
Totals	**758**	**88**	**11.6%**	**105.45**	**13.9%**	**0.8**	**93.65**	**12.4%**	**0.9**
Excluding 80+	**748**	**88**	**11.8%**	**95.45**	**12.8%**	**0.9**	**83.65**	**11.2%**	**1.1**
Female Retirement Experience									
	Actual Experience			Current Assumptions			Proposed Assumptions		
Nearest Age @ Retirement	Exposures	Retirements	Actual Rate	Expected Retirements	Assumed Rate	Actual / Expected	Expected Retirements	Proposed Rate	Actual / Expected
60	27	3	11.1%	5.94	22.0%	0.5	4.05	15.0%	0.7
61-65	124	12	9.7%	13.64	11.0%	0.9	12.40	10.0%	1.0
66-70	49	3	6.1%	5.39	11.0%	0.6	5.39	11.0%	0.6
71	6	1	16.7%	0.72	12.0%	1.4	0.66	11.0%	1.5
72	1	0	0.0%	0.14	14.0%	0.0	0.12	12.0%	0.0
73	2	0	0.0%	0.32	16.0%	0.0	0.26	13.0%	0.0
74	2	1	50.0%	0.36	18.0%	2.8	0.28	14.0%	3.6
75-79	7	0	0.0%	1.40	20.0%	0.0	1.05	15.0%	0.0
80+	0	0		0.00	100.0%		0.00	100.0%	
Totals	**218**	**20**	**9.2%**	**27.91**	**12.8%**	**0.7**	**24.21**	**11.1%**	**0.8**
Excluding 80+	**218**	**20**	**9.2%**	**27.91**	**12.8%**	**0.7**	**24.21**	**11.1%**	**0.8**

Graph II(a)

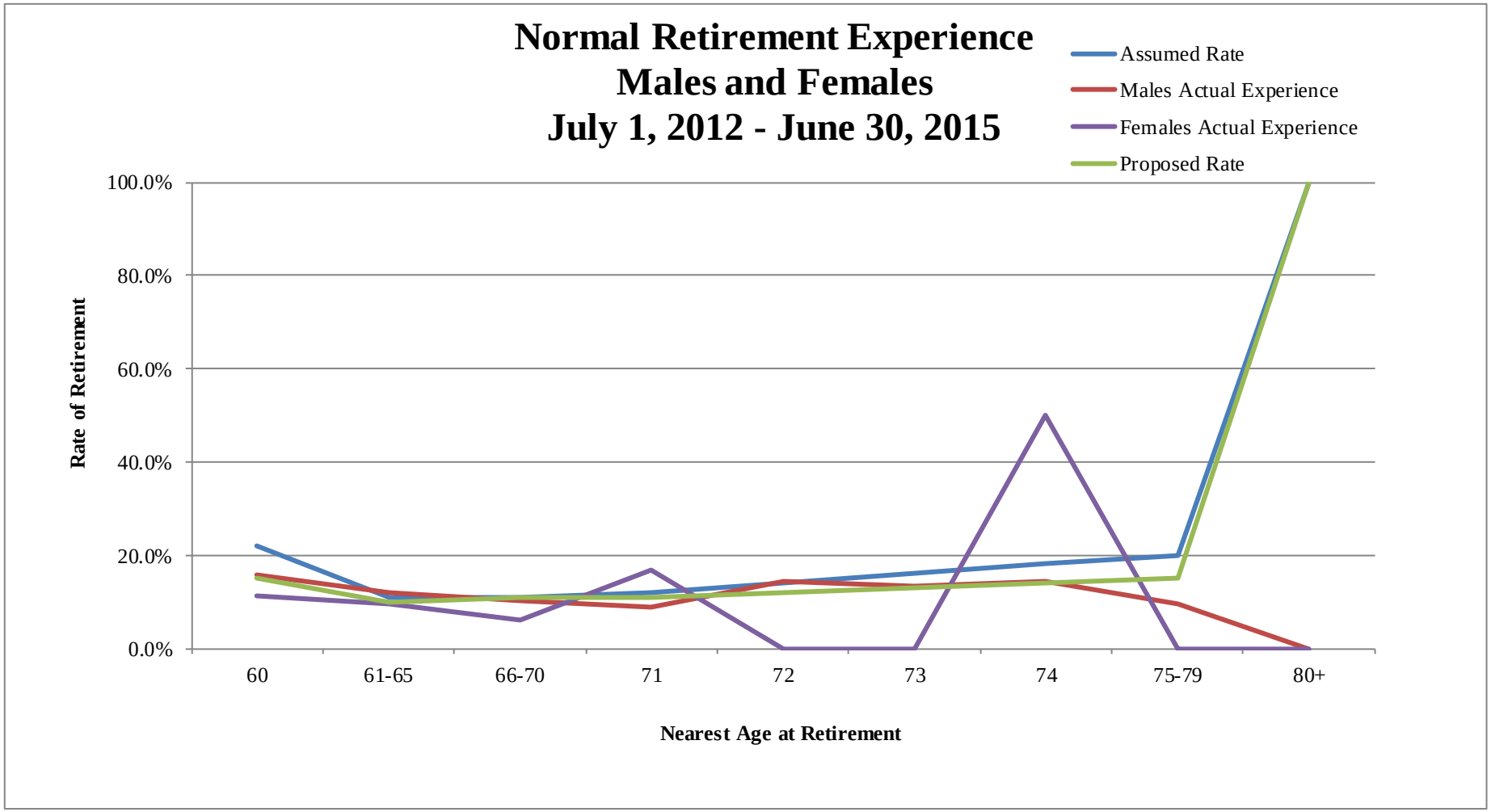

Normal Retirement Experience
Males and Females
July 1, 2012 - June 30, 2015
Assumed Rate
Males Actual Experience
Females Actual Experience
Proposed Rate
100.0%
80.0%
60.0%
40.0%
20.0%
0.0%
Rate of Retirement
60
61-65
66-70
71
72
73
74
75-79
80+
Nearest Age at Retirement

Table II(b)

Early Retirement Experience

Male Early Retirement Experience									
	Actual Experience			Current Assumptions			Proposed Assumptions		
Nearest Age @ ER Retirement	Exposures	Retirements	Actual Rate	Expected Retirements	Assumed Rate	Actual / Expected	Expected Retirements	Proposed Rate	Actual / Expected
55	32	1	3.1%	2.56	8.0%	0.4	2.08	6.5%	0.5
56	43	2	4.7%	3.44	8.0%	0.6	2.80	6.5%	0.7
57	51	3	5.9%	4.08	8.0%	0.7	3.32	6.5%	0.9
58	64	4	6.3%	5.12	8.0%	0.8	4.16	6.5%	1.0
59	67	5	7.5%	5.36	8.0%	0.9	4.36	6.5%	1.1
Totals:	**257**	**15**	**5.8%**	**20.56**	**8.0%**	**0.7**	**16.71**	**6.5%**	**0.9**
Female Early Retirement Experience									
	Actual Experience			Current Assumptions			Proposed Assumptions		
Nearest Age @ ER Retirement	Exposures	Retirements	Actual Rate	Expected Retirements	Assumed Rate	Actual / Expected	Expected Retirements	Proposed Rate	Actual / Expected
55	25	1	4.0%	2.00	8.0%	0.5	1.88	7.5%	0.5
56	32	1	3.1%	2.56	8.0%	0.4	2.40	7.5%	0.4
57	42	4	9.5%	3.36	8.0%	1.2	3.15	7.5%	1.3
58	36	4	11.1%	2.88	8.0%	1.4	2.70	7.5%	1.5
59	30	2	6.7%	2.40	8.0%	0.8	2.25	7.5%	0.9
Totals:	**165**	**12**	**7.3%**	**13.20**	**8.0%**	**0.9**	**12.38**	**7.5%**	**1.0**

JUDGES' RETIREMENT SYSTEM OF ILLINOIS
RETIREMENT ASSUMPTION – TIER TWO

Currently, there are no Tier Two members eligible for retirement. Therefore, the retirement assumptions can only be developed based upon our future expectation of the group's behavior.

We are recommending a change to the retirement rates for Tier Two members eligible for early or normal retirement benefits. Based on these changes, more Tier Two members will remain in service and eventually receive unreduced normal retirement benefits.

	Members Eligible For Reduced Early Retirement			
Nearest Age	Current Assumed Rate		Proposed Assumed Rate	
@ Retirement	Male	Female	Male	Female
62	30%	30%	11%	11%
63	10%	10%	12%	12%
64	13%	13%	13%	13%
65	16%	16%	14%	14%
66	20%	20%	15%	15%

	Members Eligible For Unreduced Normal Retirement			
Nearest Age	Current Assumed Rate		Proposed Assumed Rate	
@ Retirement	Male	Female	Male	Female
67	30%	30%	30%	30%
68-70	11%	11%	13%	13%
71	12%	12%	11%	11%
72	14%	14%	12%	12%
73	16%	16%	13%	13%
74	18%	18%	14%	14%
75-79	20%	20%	15%	15%
80+	100%	100%	100%	100%

Turnover

Turnover experience during the last three years was considered in the analysis shown on the following pages. The "Exposure" column shows the number of employees at various years of service throughout the experience period.

The "Turnover" column shows the number of employees at various years of service that have left active status for reasons other than retirement and death. This includes members moving to inactive status as well as members terminating and receiving a refund of contributions.

This assumption was developed separately for Tier One and Tier Two members.

There were slightly more terminations than expected under the current assumptions. Based on our analysis, we recommend increasing the rates for both Tier One members and Tier Two members with more than five years of services. In addition, for Tier Two members with less than five years of service, we recommend increasing the flat rate to 1.75 percent.

The table and graph on the following pages show termination experience by age.

- Table and Graph III(a) – Termination Experience by Service – Tier 1
- Table and Graph III(b) – Termination Experience by Service – Tier 2 members with less than five years of service

Table III(a)

Termination Experience by Age – Tier 1

Tier 1 Male Termination Experience									
	Actual Experience			Current Assumptions			Proposed Assumptions		
Age	Exposures	Turnover	Actual Rate	Expected Turnover	Assumed Rate	Actual / Expected	Expected Turnover	Proposed Rate*	Actual / Expected
25-29	0	0		0.00	1.28%		0.00	1.75%	
30-34	0	0		0.00	1.21%		0.00	1.75%	
35-39	4	0	0.00%	0.04	1.04%	0.0	0.06	1.64%	0.0
40-44	48	1	2.08%	0.40	0.86%	2.5	0.69	1.46%	1.5
45-49	139	3	2.16%	0.94	0.69%	3.2	1.78	1.29%	1.7
50-54	244	3	1.23%	1.26	0.52%	2.4	2.72	1.12%	1.1
55-59	186	1	0.54%	0.65	0.35%	1.5	1.77	0.95%	0.6
60-64	104	2	1.92%	0.21	0.17%	9.4	0.84	0.77%	2.4
65-69	46	1	2.17%	0.02	0.04%	60.2	0.29	0.64%	3.4
70-74	8	3	37.50%	0.00	0.03%		0.05	0.63%	59.5
75-79	0	0		0.00	0.03%		0.00	0.63%	
80+	0	0		0.00	0.03%		0.00	0.63%	
Total	**779**	**14**	**1.80%**	**3.52**	**0.45%**	**4.0**	**8.19**	**1.05%**	**1.7**
Tier 1 Female Termination Experience									
	Actual Experience			Current Assumptions			Proposed Assumptions		
Age	Exposures	Turnover	Actual Rate	Expected Turnover	Assumed Rate	Actual / Expected	Expected Turnover	Proposed Rate*	Actual / Expected
25-29	0	0		0.00	1.28%		0.00	1.75%	
30-34	0	0		0.00	1.21%		0.00	1.75%	
35-39	1	0	0.00%	0.01	1.04%	0.0	0.01	1.54%	0.0
40-44	35	0	0.00%	0.30	0.86%	0.0	0.47	1.36%	0.0
45-49	101	2	1.98%	0.69	0.69%	2.9	1.19	1.19%	1.7
50-54	158	0	0.00%	0.81	0.52%	0.0	1.60	1.02%	0.0
55-59	58	2	3.45%	0.20	0.35%	10.1	0.49	0.85%	4.1
60-64	42	0	0.00%	0.09	0.17%	0.0	0.30	0.67%	0.0
65-69	15	0	0.00%	0.01	0.04%	0.0	0.08	0.54%	0.0
70-74	0	0		0.00	0.03%		0.00	0.53%	
75-79	0	0		0.00	0.03%		0.00	0.53%	
80+	0	0		0.00	0.03%		0.00	0.53%	
Total	**410**	**4**	**0.98%**	**2.09**	**0.51%**	**1.9**	**4.14**	**1.01%**	**1.0**

**For Tier 1 members and Tier 2 members with more than five years of service*

Graph III(a)

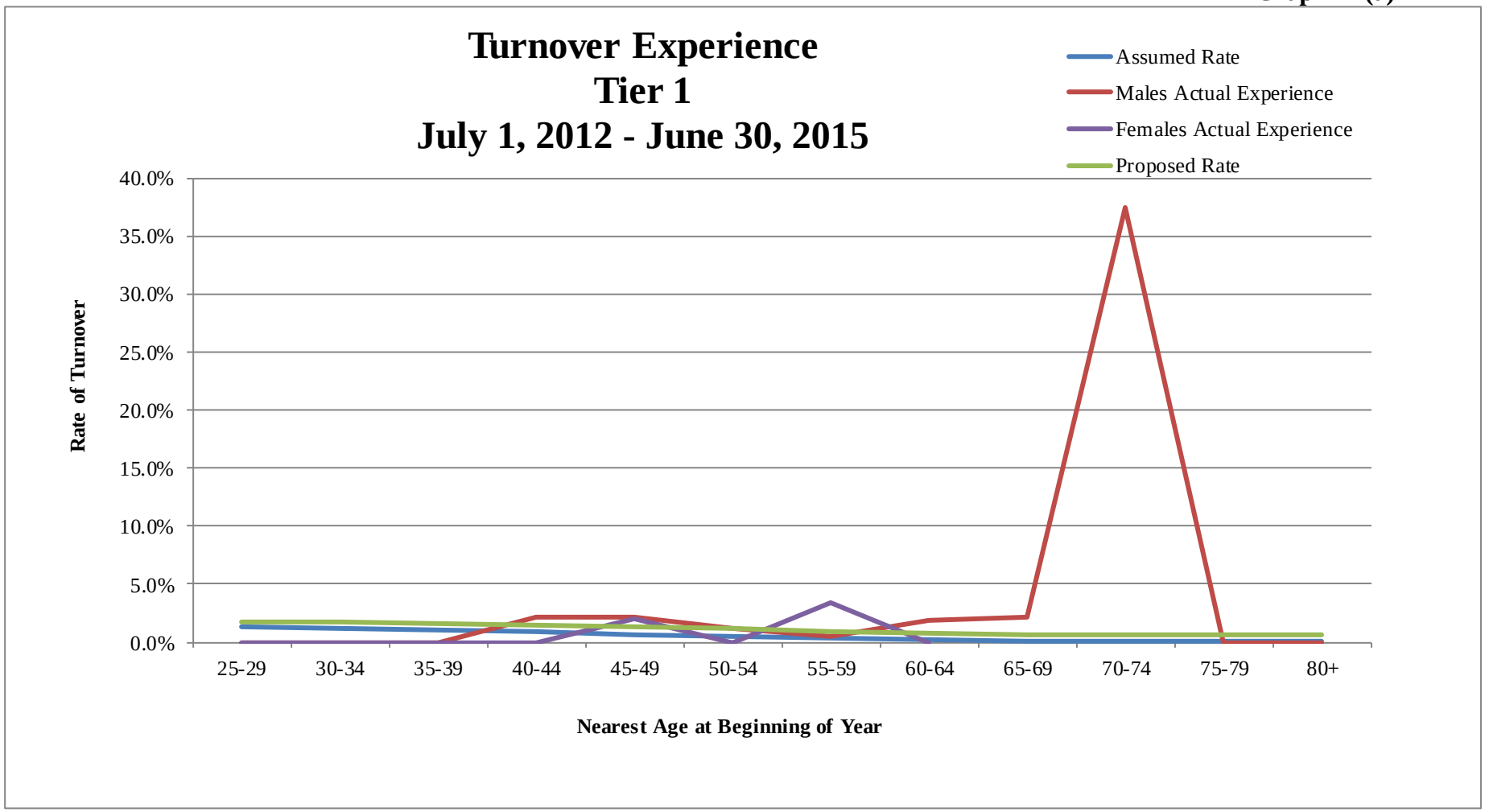
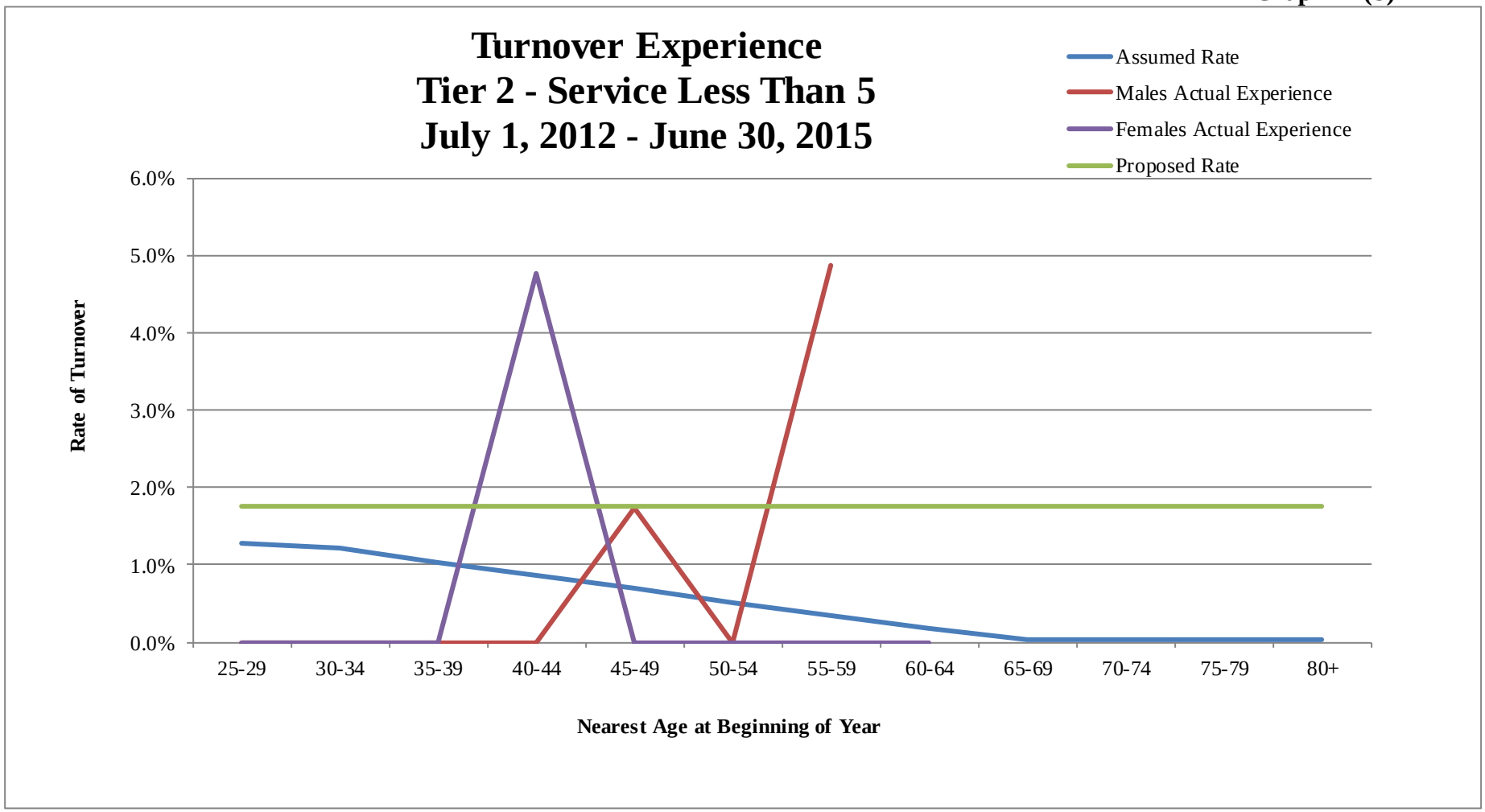

Turnover Experience
Tier 1
July 1, 2012 - June 30, 2015
Assumed Rate
Males Actual Experience
Females Actual Experience
Proposed Rate
Rate of Turnover
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
25-29
30-34
35-39
40-44
45-49
50-54
55-59
60-64
65-69
70-74
75-79
80+
Nearest Age at Beginning of Year

Table III(b)

Tier 2 Male Termination Experience - Service Less Than 5									
	Actual Experience			Current Assumptions			Proposed Assumptions		
Age	Exposures	Turnover	Actual Rate	Expected Turnover	Assumed Rate	Actual / Expected	Expected Turnover	Proposed Rate*	Actual / Expected
25-29	0	0		0.00	1.28%		0.00	1.75%	
30-34	2	0	0.00%	0.02	1.21%	0.0	0.04	1.75%	0.0
35-39	6	0	0.00%	0.06	1.04%	0.0	0.11	1.75%	0.0
40-44	22	0	0.00%	0.19	0.86%	0.0	0.39	1.75%	0.0
45-49	58	1	1.72%	0.40	0.69%	2.5	1.02	1.75%	1.0
50-54	42	0	0.00%	0.22	0.52%	0.0	0.74	1.75%	0.0
55-59	41	2	4.88%	0.14	0.35%	13.9	0.72	1.75%	2.8
60-64	23	1	4.35%	0.04	0.17%	26.2	0.40	1.75%	2.5
65-69	9	0	0.00%	0.00	0.04%		0.16	1.75%	0.0
70-74	6	0	0.00%	0.00	0.03%		0.11	1.75%	0.0
75-79	1	1	100.00%	0.00	0.03%		0.02	1.75%	57.1
80+	0	0		0.00	0.03%		0.00	1.75%	
Total	**210**	**5**	**2.38%**	**1.07**	**0.51%**	**4.7**	**3.68**	**1.75%**	**1.4**
Tier 2 Female Termination Experience - Service Less Than 5									
	Actual Experience			Current Assumptions			Proposed Assumptions		
Age	Exposures	Turnover	Actual Rate	Expected Turnover	Assumed Rate	Actual / Expected	Expected Turnover	Proposed Rate*	Actual / Expected
25-29	0	0		0.00	1.28%		0.00	1.75%	
30-34	0	0		0.00	1.21%		0.00	1.75%	
35-39	0	0		0.00	1.04%		0.00	1.75%	
40-44	21	1	4.76%	0.18	0.86%	5.7	0.37	1.75%	2.7
45-49	16	0	0.00%	0.11	0.69%	0.0	0.28	1.75%	0.0
50-54	26	0	0.00%	0.13	0.52%	0.0	0.46	1.75%	0.0
55-59	12	0	0.00%	0.04	0.35%	0.0	0.21	1.75%	0.0
60-64	8	0	0.00%	0.01	0.17%	0.0	0.14	1.75%	0.0
65-69	1	1	100.00%	0.00	0.04%		0.02	1.75%	57.1
70-74	0	0		0.00	0.03%		0.00	1.75%	
75-79	0	0		0.00	0.03%		0.00	1.75%	
80+	0	0		0.00	0.03%		0.00	1.75%	
Total	**84**	**2**	**2.38%**	**0.48**	**0.57%**	**4.2**	**1.47**	**1.75%**	**1.4**

***** *Tier Two members with more than five years of service are assumed to have the same termination rates as Tier One members.*

Graph III(b)


Turnover Experience
Tier 2 - Service Less Than 5
July 1, 2012 - June 30, 2015
Assumed Rate
Males Actual Experience
Females Actual Experience
Proposed Rate
6.0%
5.0%
4.0%
3.0%
2.0%
1.0%
0.0%
Rate of Turnover
25-29
30-34
35-39
40-44
45-49
50-54
55-59
60-64
65-69
70-74
75-79
80+
Nearest Age at Beginning of Year

Mortality

Post-retirement mortality is an important component in cost calculations and should be updated periodically to reflect current and expected future longevity improvements. Pre-retirement mortality is a relatively minor component in cost calculations. The frequency of pre-retirement deaths is so low that mortality assumptions based on actual experience can only be produced for very large retirement systems.

The trend of mortality improvement has been a long and relatively constant one in the United States over the past century. While most experts agree that overall mortality will improve in the near future, there are differing opinions on the long-term trend in mortality improvement. In order to allow for expected future mortality improvements, we recommend adopting generational mortality tables based on the mortality tables recently released by the Society of Actuaries ("SOA") in which mortality rates are projected to improve based on birth year.

Retirees

We reviewed the mortality experience separately for active members and service retirees during the three-year study period. The results shown on the following pages indicate that there were more deaths than expected under the current assumption.

We recommend changing the post-retirement mortality assumption from the RP-2000 mortality table, sex distinct, with rates projected to 2015, to the RP-2014 White Collar Total Healthy Annuitant mortality table, sex distinct, with rates set forward one year for males and set back one year for females and generational mortality improvement using MP-2014 2-dimensional mortality improvement scales recently released by the SOA. This assumption provides a provision for future mortality improvements.

Active Participants

We recommend changing the pre-retirement mortality assumption to the RP-2014 White Collar Total Employee mortality table, sex distinct and generational mortality improvement using MP-2014 2-dimensional mortality improvement scales recently released by the SOA, to reflect that experience shows active members having lower mortality rates than retirees of the same age.

A Note about Mortality Rates

The recommended mortality assumptions include generational mortality improvements, which means that the probability of a 60-year-old retired male dying in any particular year is higher for a 60-year old born in 1954 than a 60-year old born in 1994.

The use of generational mortality tables is an emerging trend in the actuarial industry, and is based on the assumption that life expectancy increases from generation to generation. Simply put, this means that the life expectancy of someone born in 1994 is greater than that of someone born in 1954. Adopting a generational mortality table tends to increase liabilities, as future increases in life expectancy imply longer payment of retirement benefits. Should the assumption

of increased life expectancy prove true, actuarial valuations that continue to use static mortality tables may be required to update their tables to reflect the improved life expectancy, resulting in liability increases in the future. To the extent that future mortality improvements can be reflected in a current valuation, retirement systems can begin to fund for the increased liabilities, thereby reducing (or eliminating) future contribution rate increases that would eventually occur with the use of static tables.

Critics of generational mortality tables point to recent trends in declining health in the United States, such as increases in the incidence of childhood obesity and diabetes, as evidence against the premise of continued mortality improvements in the future.

We believe that the recommended mortality tables contain a sufficient level of conservatism to cover any increases in life expectancy in the near future. We will continue to monitor the use and acceptance of generational mortality tables by public retirement systems and keep the Board apprised of emerging trends.

The following tables and graphs contain the mortality experience for the experience study period:

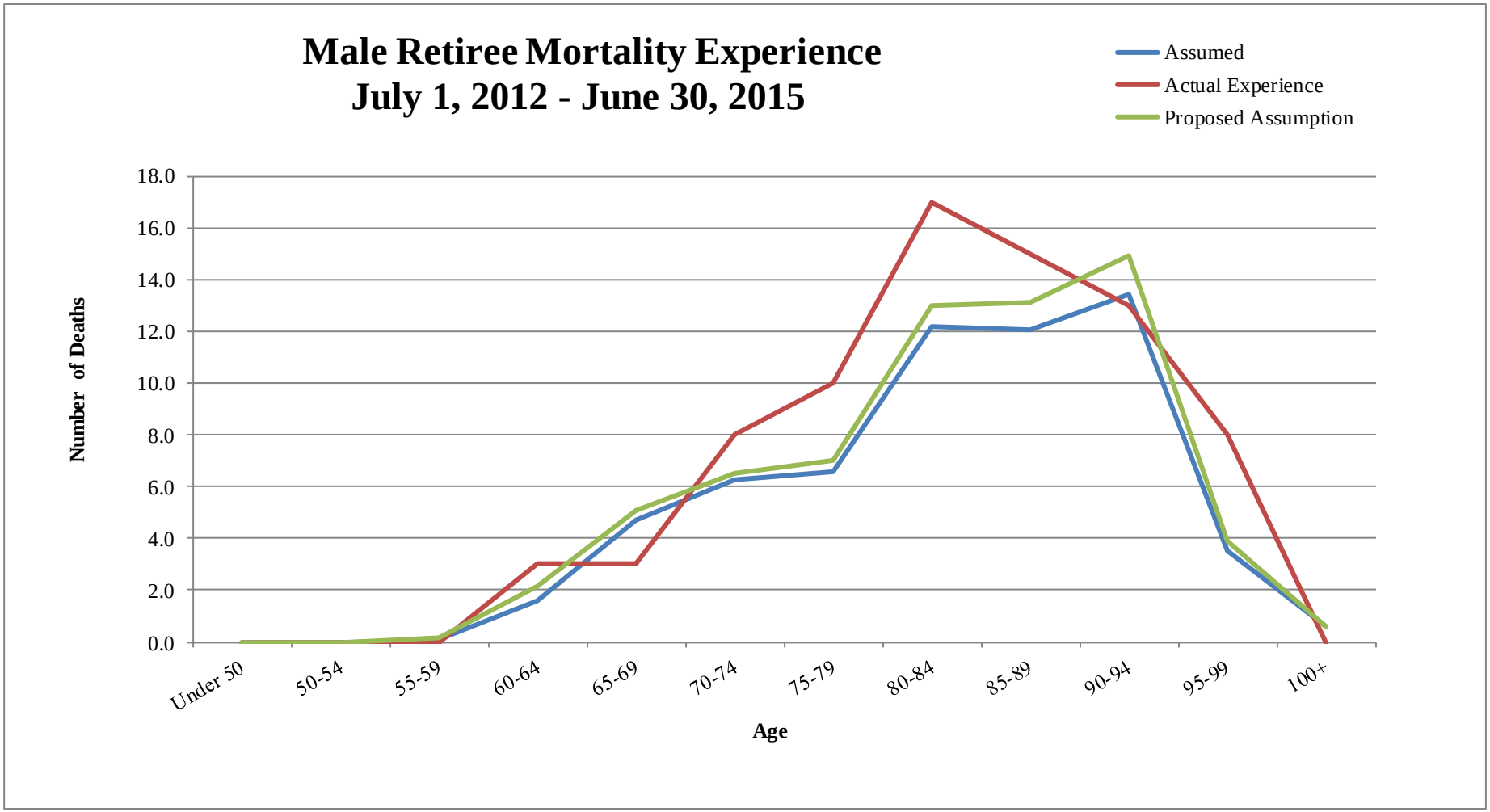
- Table and Graph IV(a) – Post-Retirement Mortality Experience
- Table IV(b) – Pre-Retirement Mortality Experience

Table IV(a)

Post-Retirement Mortality Experience

Male Service Retiree Mortality Experience									
	Actual Experience			Current Assumptions			Proposed Assumptions		
Age	Exposures	Deaths	Actual Rate	Expected Deaths	Assumed Rate	Actual / Expected	Expected Deaths	Proposed Rate	Actual / Expected
Under 50	0	0		0		0.00	0		0.00
50-54	0	0		0			0		
55-59	33	0	0.000%	0	0.280%	0.00	0	0.488%	0.00
60-64	318	3	0.943%	2	0.506%	1.87	2	0.668%	1.41
65-69	511	3	0.587%	5	0.918%	0.64	5	0.997%	0.59
70-74	397	8	2.015%	6	1.571%	1.28	7	1.643%	1.23
75-79	240	10	4.167%	7	2.729%	1.53	7	2.915%	1.43
80-84	247	17	6.883%	12	4.940%	1.39	13	5.263%	1.31
85-89	137	15	10.949%	12	8.809%	1.24	13	9.582%	1.14
90-94	88	13	14.773%	13	15.252%	0.97	15	16.923%	0.87
95-99	15	8	53.333%	4	23.430%	2.28	4	26.031%	2.05
100+	2	0	0.000%	1	29.098%	0.00	1	28.991%	0.00
Totals	**1,988**	**77**	**3.873%**	**61**	**3.067%**	**1.26**	**66**	**3.340%**	**1.16**
Female Service Retiree Mortality Experience									
Under 50	0	0		0.00			0.00		
50-54	0	0		0.00			0.00		
55-59	10	0	0.000%	0.03	0.306%	0.00	0.03	0.321%	0.00
60-64	74	0	0.000%	0.37	0.506%	0.00	0.34	0.454%	0.00
65-69	76	1	1.316%	0.67	0.881%	1.49	0.53	0.693%	1.90
70-74	58	1	1.724%	0.90	1.545%	1.12	0.67	1.148%	1.50
75-79	23	0	0.000%	0.58	2.500%	0.00	0.44	1.913%	0.00
80-84	10	3	30.000%	0.37	3.682%	8.15	0.29	2.934%	10.22
85-89	6	1	16.667%	0.50	8.386%	1.99	0.43	7.115%	2.34
90-94	2	2	100.0000%	0.20	10.104%	9.90	0.17	8.680%	11.52
95-99	0	0		0.00			0.00		
100+	0	0		0.00			0.00		
Totals	**259**	**8**	**3.089%**	**3.62**	**1.397%**	**2.21**	**2.89**	**1.118%**	**2.76**
Grand Totals	**2,247**	**85**	**3.783%**	**65**	**2.874%**	**1.32**	**69**	**3.084%**	**1.23**

Graph IV(a)(1) – Male



Graph IV(a)(2) – Female

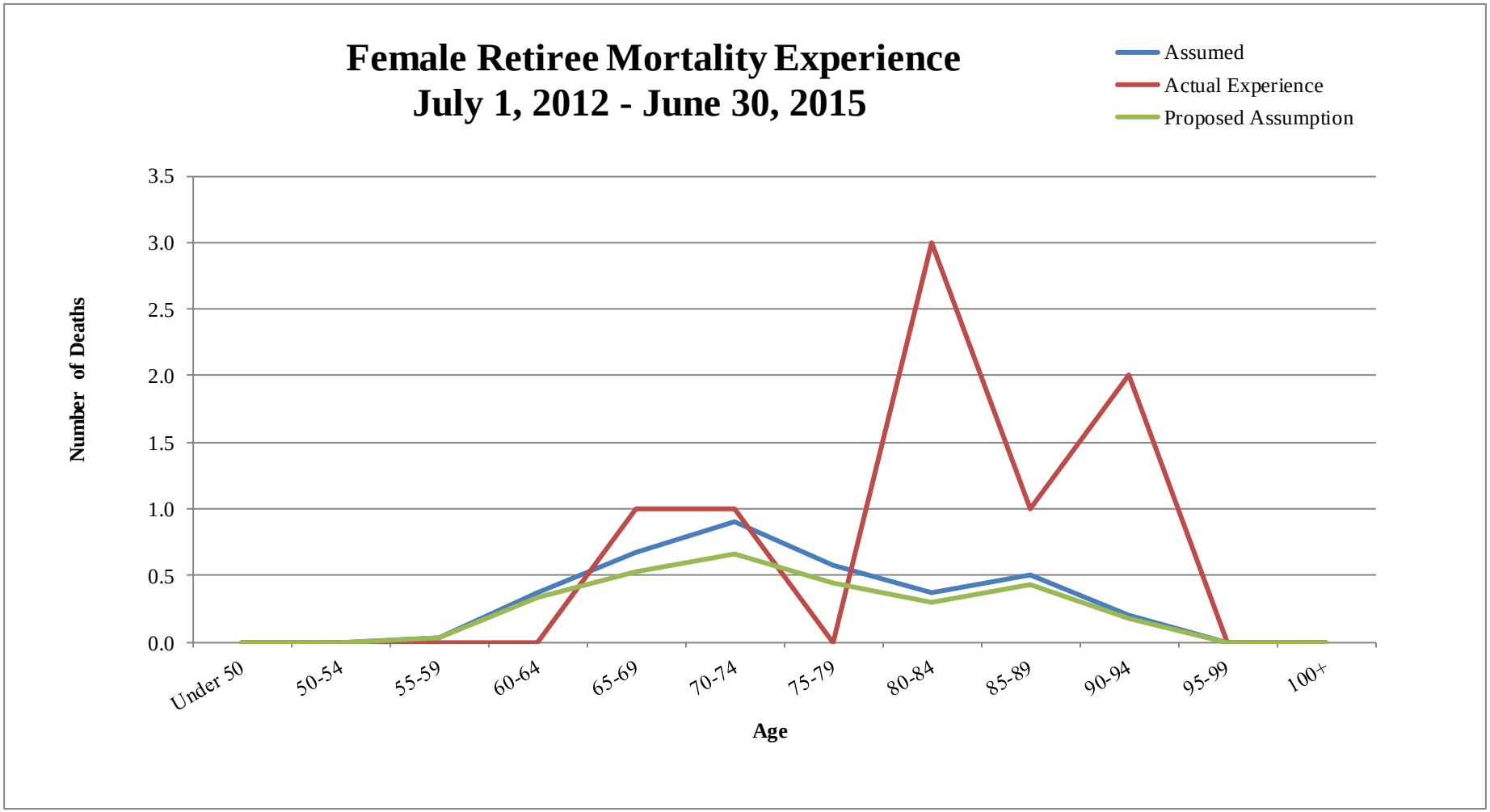


Table IV(b)

Pre-Retirement Mortality Experience

Male Active Mortality Experience									
	Actual Experience			Current Assumptions			Proposed Assumptions		
Age	Exposures	Deaths	Actual Rate	Expected Deaths	Assumed Rate	Actual / Expected	Expected Deaths	Proposed Rate	Actual / Expected
Under 30	0	0		0			0		
30-39	12	0	0.000%	0	0.070%	0.00	0	0.039%	0.00
40-49	267	0	0.000%	0	0.113%	0.00	0	0.079%	0.00
50-59	770	0	0.000%	2	0.217%	0.00	2	0.206%	0.00
60-69	797	4	0.502%	5	0.626%	0.80	4	0.518%	0.97
70-79	148	2	1.351%	3	1.791%	0.75	2	1.431%	0.94
Over 80	0	0		0			0		
Totals	**1,994**	**6**	**0.301%**	**10**	**0.483%**	**0.62**	**8**	**0.404%**	**0.75**
Less than 80	**1,994**	**6**	**0.301%**	**10**	**0.483%**	**0.62**	**8**	**0.404%**	**0.75**
Female Active Mortality Experience									
Age	Exposures	Deaths	Actual Rate	Expected Deaths	Assumed Rate	Actual / Expected	Expected Deaths	Proposed Rate	Actual / Expected
Under 30	0	0		0			0		
30-39	1	0	0.000%	0	0.046%	0.00	0	0.030%	0.00
40-49	173	0	0.000%	0	0.080%	0.00	0	0.061%	0.00
50-59	419	0	0.000%	1	0.199%	0.00	1	0.142%	0.00
60-69	258	0	0.000%	2	0.582%	0.00	1	0.275%	0.00
70-79	26	0	0.000%	0	1.756%	0.00	0	0.783%	0.00
Over 80	0	0		0			0		
Totals	**877**	**0**	**0.000%**	**3**	**0.334%**	**0.00**	**2**	**0.184%**	**0.00**
Less than 80	**877**	**0**	**0.000%**	**3**	**0.334%**	**0.00**	**2**	**0.184%**	**0.00**
Grand Totals	**2,871**	**6**	**0.209%**	**13**	**0.437%**	**0.48**	**10**	**0.337%**	**0.62**
Less than 80	**2,871**	**6**	**0.209%**	**13**	**0.437%**	**0.48**	**10**	**0.337%**	**0.62**

SECTION III
COST IMPACT

JUDGES' RETIREMENT SYSTEM OF ILLINOIS
COST IMPACT OF RECOMMENDED CHANGES

The impact of adopting the recommended assumptions is summarized in the table below and on the following pages. The results are based on the June 30, 2015, valuation and plan provisions in effect as of June 30, 2015.

		Experience Study		
	Valuation Baseline	7.00% Discount Rate Changing Mortality Tables	7.00% Discount Rate Changing Mortality Tables and all Demographic Assumptions	6.75% Discount Rate Changing Mortality Tables and all Demographic Assumptions
1) Number of Members				
a. Active	961	961	961	961
b. Inactive:				
i. Eligible for deferred vested pension benefits	10	10	10	10
ii. Eligible for return of contributions only	14	14	14	14
c. Current Benefit Recipients:				
i. Retirement annuities	787	787	787	787
ii. Survivor annuities	334	334	334	334
d. Total	2,106	2,106	2,106	2,106
2) Covered Payroll	$ 177,164,450	$ 177,164,450	$ 177,164,450	$ 177,164,450
3) Annualized Benefit Payments Currently Being Made				
a. Retirement	$ 104,371,772	$ 104,371,772	$ 104,371,772	$ 104,371,772
b. Survivor	23,495,658	23,495,658	23,495,658	23,495,658
d. Total	$ 127,867,430	$ 127,867,430	$ 127,867,430	$ 127,867,430
4) Actuarial Liability—Annuitants				
a. Current Benefit Recipients:				
i. Retirement annuities	$ 1,352,177,476	$ 1,413,038,497	$ 1,413,038,497	$ 1,448,075,853
ii. Survivor annuities (Including Reversionary)	211,172,152	230,070,987	230,070,987	234,703,656
b. Total	$ 1,563,349,628	$ 1,643,109,484	$ 1,643,109,484	$ 1,682,779,510
5) Actuarial Liability—Inactive Members	$ 7,639,743	$ 8,052,887	$ 8,052,887	$ 8,385,975
6) Active Members				
a. Pension Benefits	$ 548,358,004	$ 575,238,754	$ 528,631,048	$ 547,254,718
b. Cost-of-Living Adjustments	176,112,178	199,586,667	182,887,771	192,915,520
c. Death Benefits	16,844,267	15,129,196	16,019,568	16,534,141
d. Disability	-	-	-	-
e. Withdrawal	1,843,495	1,902,363	4,042,585	4,249,039
f. Expenses	-	-	-	-
g. Total	$ 743,157,944	$ 791,856,980	$ 731,580,972	$ 760,953,418
7) Total Actuarial Liability (4 + 5 + 6)	$ 2,314,147,315	$ 2,443,019,351	$ 2,382,743,343	$ 2,452,118,903
8) Market Value of Assets (MVA)	$ 833,910,155	$ 833,910,155	$ 833,910,155	$ 833,910,155
9) Unfunded Actuarial Liability Based on MVA (7 – 8)	$ 1,480,237,160	$ 1,609,109,196	$ 1,548,833,188	$ 1,618,208,748
10) Funded Percentage Based on MVA (8 ÷ 7)	36.04%	34.13%	35.00%	34.01%
11) Actuarial Value of Assets (AVA)	$ 804,188,844	$ 804,188,844	$ 804,188,844	$ 804,188,844
12) Unfunded Actuarial Liability Based on AVA (7 – 11)	$ 1,509,958,471	$ 1,638,830,507	$ 1,578,554,499	$ 1,647,930,059
13) Funded Percentage Based on AVA (11 ÷ 7)	34.75%	32.92%	33.75%	32.80%
14) Total Normal Cost	$ 57,098,324	$ 60,960,477	$ 56,146,937	$ 58,566,855
15) Employee Contributions	$ 14,634,345	$ 14,637,276	$ 14,691,651	$ 14,691,651
16) Annual Employer Normal Cost	$ 42,463,979	$ 46,323,201	$ 41,455,286	$ 43,875,204
(% payroll)	23.97%	26.15%	23.40%	24.77%

Impact on the FY 2018 GASB Statements Nos. 67 and 68 Actuarially Determined Contribution and FY 2018 Statutory Contribution

	Valuation Baseline	7.00% Discount Rate Changing Mortality Tables	7.00% Discount Rate Changing Mortality Tables and all Demographic Assumptions	6.75% Discount Rate Changing Mortality Tables and all Demographic Assumptions
1. Employer normal cost for FY 2018	$ 41,194,238	$ 45,136,231	$ 40,453,568	$ 42,797,021
2. Initial amount to amortize the unfunded liability over a 25-year closed period as level percentage of capped payroll	111,192,834	120,664,935	118,501,461	120,913,186
3. Estimated FY 2018 ADC [(1) + (2)]	$ 152,387,072	$ 165,801,165	$ 158,955,029	$ 163,710,207
4. ADC as a percentage of projected capped payroll	91.831%	99.890%	96.530%	99.418%
5. Estimated FY 2018 statutory contribution	$ 131,384,105	$ 145,724,762	$ 140,338,299	$ 144,533,089
6. Estimated statutory contribution as a percentage of projected capped payroll	79.174%	87.795%	85.224%	87.772%
7. Estimated statutory contribution as a percentage of ADC [(5)/(3)]	86.217%	87.891%	88.288%	88.286%

Actuarial Accrued Liability and Actuarial Value of Assets

Determined as of June 30, 2015 [a] [b]

($ in millions)

	Actuarial Accrued Liability				Actuarial Value of Assets			
		Experience Study				Experience Study		
June 30,	Valuation Baseline	7.00% Discount Rate Changing Mortality Tables	7.00% Discount Rate Changing Mortality Tables and all Demographic Assumptions	6.75% Discount Rate Changing Mortality Tables and all Demographic Assumptions	Valuation Baseline	7.00% Discount Rate Changing Mortality Tables	7.00% Discount Rate Changing Mortality Tables and all Demographic Assumptions	6.75% Discount Rate Changing Mortality Tables and all Demographic Assumptions
2016	$2,392.36	$2,534.25	$2,465.43	$2,536.15	$879.56	$879.57	$880.27	$878.20
2017	2,466.61	2,622.44	2,545.38	2,617.26	959.07	959.01	961.18	956.73
2018	2,535.81	2,706.49	2,621.32	2,694.18	1,027.14	1,041.70	1,040.44	1,037.63
2019	2,600.07	2,786.51	2,693.32	2,766.97	1,077.43	1,107.53	1,102.55	1,101.31
2020	2,658.38	2,861.42	2,760.33	2,834.59	1,126.82	1,173.37	1,164.43	1,164.76
2025	2,848.30	3,146.34	3,009.36	3,084.09	1,310.17	1,452.06	1,422.10	1,430.03
2030	2,862.16	3,270.12	3,102.43	3,174.53	1,395.18	1,651.26	1,596.94	1,611.97
2035	2,732.49	3,253.36	3,056.52	3,124.80	1,451.05	1,832.03	1,743.03	1,766.47
2040	2,538.92	3,156.70	2,926.98	2,992.13	1,635.50	2,138.55	1,992.37	2,030.60
2045	2,373.01	3,053.38	2,786.45	2,850.58	2,135.74	2,747.96	2,507.93	2,565.58

[a] *Based on the plan provisions in effect as of June 30, 2015.*

[b] *State Contribution Based on Public Act 88-0593, Public Act 93-0002, Public Act 94-0004, Public Act 96-0043. The projection results include GOB proceeds and phase-in of deferred asset gains and losses recognized in the projected actuarial value of assets.*

Unfunded Accrued Liability and Funded Ratio

Determined as of June 30, 2015 [a] [b]

($ in millions)

	Unfunded Accrued Liability				Funded Ratio			
		Experience Study				Experience Study		
June 30,	Valuation Baseline	7.00% Discount Rate Changing Mortality Tables	7.00% Discount Rate Changing Mortality Tables and all Demographic Assumptions	6.75% Discount Rate Changing Mortality Tables and all Demographic Assumptions	Valuation Baseline	7.00% Discount Rate Changing Mortality Tables	7.00% Discount Rate Changing Mortality Tables and all Demographic Assumptions	6.75% Discount Rate Changing Mortality Tables and all Demographic Assumptions
2016	$1,512.80	$1,654.68	$1,585.16	$1,657.95	36.77%	34.71%	35.70%	34.63%
2017	1,507.54	1,663.43	1,584.20	1,660.53	38.88%	36.57%	37.76%	36.55%
2018	1,508.67	1,664.79	1,580.88	1,656.55	40.51%	38.49%	39.69%	38.51%
2019	1,522.64	1,678.98	1,590.77	1,665.66	41.44%	39.75%	40.94%	39.80%
2020	1,531.56	1,688.05	1,595.90	1,669.83	42.39%	41.01%	42.18%	41.09%
2025	1,538.13	1,694.28	1,587.26	1,654.06	46.00%	46.15%	47.26%	46.37%
2030	1,466.98	1,618.86	1,505.49	1,562.56	48.75%	50.50%	51.47%	50.78%
2035	1,281.44	1,421.33	1,313.49	1,358.33	53.10%	56.31%	57.03%	56.53%
2040	903.42	1,018.15	934.61	961.53	64.42%	67.75%	68.07%	67.86%
2045	237.27	305.42	278.52	285.00	90.00%	90.00%	90.00%	90.00%

[a] *Based on the plan provisions in effect as of June 30, 2015.*

[b] *State Contribution Based on Public Act 88-0593, Public Act 93-0002, Public Act 94-0004, Public Act 96-0043. The projection results include GOB proceeds and phase-in of deferred asset gains and losses recognized in the projected actuarial value of assets.*

Required State Contribution
Determined as of June 30, 2015 [a, b]
($ in millions)

	Contribution Dollar				Contribution Percent			
		Experience Study				Experience Study		
Fiscal Year	Valuation Baseline	7.00% Discount Rate Changing Mortality Tables	7.00% Discount Rate Changing Mortality Tables and all Demographic Assumptions	6.75% Discount Rate Changing Mortality Tables and all Demographic Assumptions	Valuation Baseline	7.00% Discount Rate Changing Mortality Tables	7.00% Discount Rate Changing Mortality Tables and all Demographic Assumptions	6.75% Discount Rate Changing Mortality Tables and all Demographic Assumptions
2016	$132.06	$132.06	$132.06	$132.06	80.07%	80.07%	80.07%	80.07%
2017	131.33	131.33	131.33	131.33	79.68%	79.68%	79.68%	79.68%
2018	131.38	145.72	140.34	144.53	79.17%	87.80%	85.22%	87.77%
2019	130.66	145.10	139.13	143.31	78.28%	86.90%	84.27%	86.81%
2020	130.75	145.32	138.87	143.08	77.81%	86.44%	83.81%	86.35%
2025	135.91	151.11	142.77	147.08	78.02%	86.64%	84.02%	86.56%
2030	143.65	159.84	149.53	153.36	77.61%	86.24%	83.56%	85.70%
2035	158.55	176.25	163.28	168.22	78.02%	86.64%	84.02%	86.56%
2040	178.97	198.87	181.97	187.47	78.02%	86.64%	84.02%	86.56%
2045	205.08	227.81	205.93	212.16	78.02%	86.64%	84.02%	86.56%
Total Cont. Through 2045	$ 4,607.39	$ 5,091.93	$ 4,754.18	$ 4,886.49				
Present Value of Total Cont.	$ 1,832.61	$ 2,009.47	$ 1,902.22	$ 2,002.77				

[a] *Based on the plan provisions in effect as of June 30, 2015.*

[b] *State Contribution Based on Public Act 88-0593, Public Act 93-0002, Public Act 94-0004, Public Act 96-0043. The projection results include GOB proceeds and phase-in of deferred asset gains and losses recognized in the projected actuarial value of assets.*

SECTION IV

RECOMMENDED ASSUMPTIONS

Actuarial Methods and Assumptions

Actuarial Cost Method as Mandated by 40 ILCS 5/2-124, Adopted June 30, 1989

The projected unit credit normal cost method is used. Under this method, the projected pension at retirement age is first calculated and the value thereof at the individual member's current or attained age is determined. The normal cost for the member for the current year is equal to the value so determined divided by the member's projected service at retirement. The normal cost for the plan for the year is the sum of the individual normal costs.

The actuarial liability at any point in time is the value of the projected pensions at that time less the value of future normal costs.

For ancillary benefits for active members, in particular death and survivor benefits, termination benefits and the postretirement increases, the same procedure as outlined above is followed.

Estimated annual administrative expenses are added to the normal cost.

For valuation purposes, as well as projection purposes, an actuarial value of assets is used.

Proposed Actuarial Assumptions to be Adopted for the June 30, 2016, Valuation

Mortality

Post-Retirement Mortality

RP-2014 White Collar Total Healthy Annuitant mortality table, sex distinct, with rates set forward one year for males and set back one year for females and generational mortality improvement using MP-2014 2-dimensional mortality improvement scales recently released by the SOA. This assumption provides a margin for mortality improvements.

Pre-Retirement Mortality, including terminated vested members prior to attaining age 50

RP-2014 White Collar Total Employee mortality table, sex distinct and generational mortality improvement using MP-2014 2-dimensional mortality improvement scales recently released by the SOA, to reflect that experience shows active members having lower mortality rates than retirees of the same age

Interest

6.75 percent per annum, compounded annually.

General Inflation

2.75 percent per annum, compounded annually.

This assumption serves as the basis for the determination of Tier Two pay cap growth and annual increases that are equal to the lesser of 3.0 percent or the annual change in the consumer price index-u during the preceding 12-month calendar year.

Marriage Assumption

75.0 percent of active and retired participants are assumed to be married.

Termination

Illustrative rates of withdrawal from the plan are as follows:

Age Based Withdrawal for Tier One Members		
	Male	Female
30	0.0175	0.0175
35	0.0170	0.0160
40	0.0154	0.0144
45	0.0136	0.0126
50	0.0118	0.0108
55	0.0102	0.0092
60	0.0084	0.0074
65	0.0067	0.0057

It is assumed that terminated employees will not be rehired. The rates apply only to employees who have not fulfilled the service requirement necessary for retirement at any given age.

Salary Increases

A salary increase assumption of 3.00 percent per annum, compounded annually, was used. This 3.00 percent salary increase assumption includes an inflation component of 2.75 percent per annum, and a productivity component of 0.25 percent.

Load for Inactive Members Eligible for Deferred Vested Pension Benefits

Deferred vested liability is increased by ten percent to account for increase in final average salary due to participation in a reciprocal system.

Disability

No assumption for disability.

Population Projection

For purposes of determining annual appropriation as a percent of total covered payroll, the size of the active group is assumed to remain level at the number of actives as of the valuation date. New entrants are assumed to enter with an average age and average pay as disclosed below. The new entrant profile is based on the averages for all current active members. The average increase in uncapped payroll for the projection period is 3.25 percent per annum.

New Entrant Profile

Age Group	No.	Uncapped Salary	Capped Salary
Under 20			
20-24			
25-29	1	$ 187,018	$ 115,481
30-34	32	6,146,046	3,695,388
35-39	114	21,246,272	13,164,821
40-44	219	40,307,224	25,290,315
45-49	206	37,951,827	23,789,063
50-54	166	30,369,576	19,169,828
55-59	100	18,292,047	11,548,089
60-64	52	9,567,662	6,005,006
65-69	5	916,388	577,404
70 & Over			
Total	895	$ 164,984,060	$ 103,355,395
Avg. Salary		$ 184,340	$ 115,481
Avg. Age			46.98
Percent Male			69.05%

Retirement

Employees are assumed to retire in accordance with the rates shown below. The rates apply only to employees who have fulfilled the service requirement necessary for retirement at any given age.

Retirement Rates	
	Males & Females
60	15.00%
61-65	10.00%
66-70	11.00%
71	11.00%
72	12.00%
73	13.00%
74	14.00%
75-79	15.00%
80+	100.00%

Early Retirement Rates for Tier One Members		
	Males	Females
55	6.50%	7.50%
56	6.50%	7.50%
57	6.50%	7.50%
58	6.50%	7.50%
59	6.50%	7.50%

Assets

Assets available for benefits are used as described on page 42 of the most recent valuation report.

Expenses

As estimated and advised by JRS staff, based on current expenses and are expected to increase in relation to the projected capped payroll. Expenses are included in the normal cost.

Spouse's Age

The female spouse is assumed to be four years younger than the male spouse.

Decrement Timing

All decrements are assumed to occur beginning of year.

Decrement Relativity

Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.

Decrement Operation

Turnover decrements do not operate after the member reaches retirement eligibility.

Eligibility Testing

Eligibility for benefits is determined based upon the age nearest birthday and service on the date the decrement is assumed to occur.

415(b) and 401(a)(17) Limits

No explicit assumption is made with respect to these items.

Assumptions as a Result of Public Act 96-0889

Members hired after December 31, 2010, are assumed to make contributions on salary up to the final average compensation cap in a given year until this plan provision or administrative procedure is clarified.

State contributions, expressed as a percentage of pay, are calculated based upon capped pay.

Retirement rates for Tier Two members to account for the change in retirement age, as follows:

Retirement Rates for Tier Two Members	
	Males and Females
67	30.00%
68-70	13.00%
71	11.00%
72	12.00%
73	13.00%
74	14.00%
75-79	15.00%
80	100.00%

Early Retirement Rates for Tier Two Members	
	Males and Females
62	11.00%
63	12.00%
64	13.00%
65	14.00%
66	15.00%

Illustrative rates of withdrawal from the plan for Tier Two members are as follows:

Age Based Withdrawal for Tier Two Members		
	Male	Female
30	0.0175	0.0175
35	0.0170	0.0160
40	0.0154	0.0144
45	0.0136	0.0126
50	0.0118	0.0108
55	0.0102	0.0092
60	0.0084	0.0074
65	0.0067	0.0057

The preceding withdrawal rates for Tier Two members are the same as the rates for Tier One members.

For Tier 2 members with less than 5 years of service, withdrawal rate is flat at 1.75%.

Projection Methodology Adopted June 30, 2005, and Amended June 30, 2009

Appropriation Requirements Under P.A. 93-0002, P.A. 94-0004 and P.A. 96-0043

State Contributions under P.A. 93-0002

In general, for each year during the life of the GOB program, the state contributions to the System are to be calculated as follows:

1. Calculation of the contribution maximum
    a. A projection of contributions will be made from the valuation date to June 30, 2045. Such projection will be based on hypothetical asset values determined using the following assumptions:
        i) That the System had received no portion of the general obligation bond proceeds in excess of the scheduled contributions for the remainder of fiscal 2003 and for the entirety of 2004,
        ii) That hypothetical state contributions had been made each fiscal year from 2005 through the valuation date, based on the funding process in place prior to P.A. 93-0002 (without regard to prior state minimum requirements),
        iii) That the actual amounts of member contributions and the actual cash outflows (benefit payments, refunds and administrative expenses) for each year prior to the valuation date were realized, and
        iv) That the hypothetical fund earned returns in each prior fiscal year equal to the rate of total return actually earned by the retirement fund in that year.
    b. The hypothetical asset values developed in a., above, will not exceed the actual assets of the fund.
    c. A projection of maximum contributions for each year of the GOB program will be performed each year, by reducing the contributions produced in a., above, by the respective amount of debt service allocated to the System for each year.
2. Calculation of the contribution with GOB proceeds
    a. The basic projection of state contributions from the valuation date through June 30, 2045, will be made, taking into account all assets of the System, including the GOB proceeds.
    b. State contribution rates (expressed as a percentage of covered pay), in the pattern required by the funding sections of the statutes, are calculated.
    c. In those projections, the dollars of state contributions which are added to assets each year during the GOB program are limited by the contribution maximum. Because the bonds are to be liquidated by the end of fiscal 2033, there is no contribution maximum thereafter.

State Contributions under P.A. 94-0004

The following is an excerpt from the Illinois Compiled statutes 40 ILCS 5/2-124:

(c) Notwithstanding any other provision of this Article, the total State contribution for fiscal year 2006 is $4,157,000.

Notwithstanding any other provision of this Article, the total State contribution for fiscal year 2007 is $5,220,300.

For each State fiscal years 2008 through 2010, the State contribution to the System, as a percentage of the applicable payroll, shall be increased in equal annual increments from the required State contribution for State fiscal year 2007, so that by State fiscal year 2011, the State is contributing at a rate otherwise required under this Section.

State Contributions under P.A. 96-0043

The following is an excerpt from the Illinois Compiled statutes 40 ILCS 5/2-124:

(d) For purposes of determining the required State contribution to the System, the value of the System's assets shall be equal to the actuarial value of the System's assets, which shall be calculated as follows:

As of June 30, 2008, the actuarial value of the System's assets shall be equal to the market value of the assets as of that date. In determining the actuarial value of the System's assets for fiscal years after June 30, 2008, any actuarial gains or losses from investment return incurred in a fiscal year shall be recognized in equal annual amounts over the 5-year period following that fiscal year.

(e) For purposes of determining the required State contribution to the system for a particular year, the actuarial value of assets shall be assumed to earn a rate of return equal to the system's actuarially assumed rate of return.